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ABSTRACT

Children's "information books" are usually illustrated books on one topic, typically identified by the title. For example, "Squirrels" tells all about the characteristics and behaviors of squirrels. An exploration of what does or does not constitute an information book using five specific questions about the genre yields an outline of the structure with six global elements present, as follows: (1) topic presentation--an obligatory element that announces the topic of the book; (2) description of attributes--also obligatory, this element describes attributes of the class of animal, object, etc., that the book is about; (3) characteristic events--an obligatory element that is usually the longest element in the book; (4) category comparison--a frequent but optional element that discusses the different members of the category; (5) final summary--a frequent optional element that is a summary statement about the information covered and that always follows the information; (6) afterword--an optional, infrequent element (preferred by certain authors), always at the very end of the book adding extra information about the topic. The variable order and interspersion of elements in the text may be relevant factors regarding children's learning about information books in general. (Data tables are included.) (NKA)

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Exploring the Global Structure of "Information Books"

Paper presented at the Annual Meeting of the National Reading Conference, Austin, TX., December 2-6, 1986.

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Running Head: EXPLORING INFORMATION BOOKS

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Exploring the Global Structure of "Information Books"

There is very little research on young children's understanding of written non-story genres. There is research indicating that children do acquire an "awareness" that writing is used for different purposes (Schickedanz, 1986) at an early age. For example, in her case study of her son's learning to read and write, Bissex (1980) reported that Paul (between the ages of 5-9) spent quite a lot of time writing informational pieces-- "all-I-know" books-- as well as stories. His exploration with different forms reflected a rudimentary sense of genre in terms of functional differences. Similarly, Harste, Burke, and Woodward (1983) noted that the preschool children in their study appeared to possess some notions of different written genres because of the ways by they could identify particular genres. Although young children may have a "sense" of genre, studies with older children suggest that specific knowledge about the organization of the message aspects of non-story genres may develop later than story competence. For example, Hidi & Hildyard (1983) and Langer (1985), who have examined older elementary students' competence regarding narrative versus expository discourse forms, have reported that students have less control of expository ones.

It has been suggested (Langer, 1985) that the control of expository discourse forms may be due to less experience with written non-story genres at an early age. This is an appealing hypothesis because relatively few non-story books

like information books were written by authors of children literature around 10-15 years ago. There is, however, another side of this hypothesis. Since story episodes are similar to those of narratives of personal experience, it could be that the schemas of story are being developed in very young children as they participate in everyday conversations, and exposure to other genres could never equal this "story" influence.

In sum, we know very little about young children's acquisition of the "book language" or the registers of non-story genres. And, a major reason for this lack is because very few text-analytic schemes are available to explore specifically the structure and properties of these types of genres. Those who do explore genre differences usually use a general prose analysis system like Meyer's (1975) and apply the scheme on any and all types of discourse investigated in their particular study. However, this practice may mask another possible explanation for children's apparent lack of ability in using expository or non-story discourse-- namely, perhaps the nature of the structure of such an expository genre (like "information books") is a factor in children's difficulty with the genre. Thus, while the development of the global structure of the information book genre is important step in my own research on the ontogenesis of the registers of written language (Pappas, in press; Pappas & Brown, in press), such a scheme may also contribute to research on discourse processing in

general. This paper reports on the preliminary, tentative findings of my attempts to describe the generic shape or global structure of information books written for young children (young children being defined here as preschool and primary or early elementary children).

Method

What Are "Information Books"?

Information books are illustrated books (or books having photographs) that are usually on one topic, that topic typically identified by the title. For example, Tunnels by Gail Gibbons (1984b)-- who is a prolific author of information books-- is a book which describes the many kinds of tunnels that are made and how they are used; Squirrels by Brian Wildsmith (1974) is one which tells all about the characteristics and behaviors of squirrels; Big City Port by Betty Maestro and Ellen DelVecchio (1983) is a book which reports on the things and doings at a port of a big city. The text of the first few pages of each of these three books clearly indicates that a non-story genre is involved:

Tunnels (Gibbons, 1984b)

> Most tunnels are long holes dug underground. Very small tunnels are dug by ants and worms. They live in them. Moles, chipmunks and prairie dogs dig bigger tunnels. They dig their tunnels with their front feet.

Squirrels (Wildsmith, 1974)

It is easy to recognize a squirrel. He is a furry, small animal with a long, bushy tail, two strong back legs, two small front paws, two large tufted ears which stick up, and two big front teeth. He looks happy and mischievous.

Big City Port (Maestro & DelVecchio, 1983)

A big city port is a busy place. Boats and ships come into the port to load and unload. It is a safe place for them to dock. Freighters, tankers, and passage lines are large ships that come into the port. The smaller tugboats, ferryboats, and fishing boats come, too.

Procedures

The attempt to describe the global structure of the information book genre involves trying to get an explicit idea of what does or does not count as an information book. In this task I have relied on Hasan's work on the definition of genres (1984a, 1984b, in press). My inquiry consists of the construction of the overall plan or the outline of this certain discourse type. Now this outline-- the generic structure-- is not a rigid one, one without variation. Instead texts belonging to the same genre can display variation within a limit that is specified by what Hasan (in press) calls the generic structure potential.

The investigation of describing this structure involves asking five questions (after Hasan, in press):

1. What elements must occur in every text to be regarded as belonging to the genre? That is, what are the obligatory elements that all information books must contain?

2. What elements may or may not occur in every text in the genre? That is, what are the optional elements that may be found in information books?

3. What elements may occur iteratively? That is, what are the elements that can repeat or occur more than once?

4. What elements have a fixed order of occurrence in relation to other elements? That is, is there a certain sequence for some elements?

5. What elements have an optional or variable order of occurrence in relation to other elements? That is, is there an optional sequence for some elements?

Results

It is by answering these five questions about a corpus of individual information books (in my case 100+ books) that the global structure comes about. In my preliminary analysis, six global elements-- three obligatory elements and three optional ones-- have been identified. They are:

Topic Presentation	TP	(Obligatory)
Description of Attributes	DA	(Obligatory)
Characteristic Events	CE	(Obligatory)
Category Comparison	CC	(Optional)
Final Summary	FS	(Optional)
Afterword	A	(Optional)

Topic Presentation . The Topic Presentation (TP) element is an obligatory element that presents or announces the topic of the book. This element is always the first

element of the book, but this information may either precede a subsequent element as a distinct or "discrete" element or it may be interspersed in a subsequent element. Discrete Topic Presentation elements can be short-- one sentence-- or may be longer stretches of text. Table 1 provides some examples of discrete Topic Presentation elements:

Insert Table 1 about here

Table 2 shows Topic Presentation elements that are interspersed in a subsequent element:

Insert Table 2 about here

Description of Attributes. The Description of Attributes (DA) element is also an obligatory element. As the label implies, this element describes attributes of the class of animal (squirrels), object (tunnels), place (department store), process (flying) that the information book is about. Sometimes this information is "blocked" together, that is, it is discrete like a discrete Topic Presentation element. An example from Squirrels (Wildsmith, 1974)-- see Table 3-- illustrates such a realization.

Insert Table 3 about here

As you can note, clauses in the Description of Attributes element are mainly relational processes-- attributive or identifying processes or what Halliday (1985) terms processes of being. In other books, this Description of Attributes information is frequently interspersed into with other elements-- mostly in the Characteristic Events element or the Category Comparison element. Although the Topic Presentation element has a fixed order-- always the first element-- the Description of Attributes element has a variable order. This is also an iterative element in that it may repeat within an information book.

Characteristic Events. The Characteristic Events (CE) element is an obligatory element that is usually the longest element in information books. In this element characteristic or habitual or typical processes/events are expressed. For example, in books about animals, the element expresses what animals typically do-- where and how they live, their behaviors (like squirrels scamper up and down trees, leap to trees, scurry along boughs, etc.), how they give birth to young, what they eat. In books about objects-- such as trucks, machines, tunnels-- the characteristic events involve how humans use these objects, or what these objects do for us or to us (like germs in the book Germs Make Me Sick! (Berger, 1985)), or how objects are made (such as tunnels in the Tunnels book (Gibbons, 1984b)). In books on places-- like Big City Port (Maestro & DelVecchio, 1983) or Department Store (Gibbons, 1984a)-- the

processes deal with what is going on at that type of place and frequently what is going on for a particular time span, such as what happens on a typical day. Like the Description of Attributes element, this element has a variable order, is iterative, and can be either discrete or be interspersed in another element.

Category Comparison. The Category Comparison (CC) element is a frequent but optional element. This element compares or discusses the different members of a class or category the information book is about. Thus, this element will talk about red squirrels and gray squirrels (like in the book The Squirrel (Lane, 1981)) or about the different kinds of tunnels-- tunnels made by animals and people, or the rock, soft ground, underwater, and cut-and-cover tunnels described in the Tunnels book (Gibbons, 1984b). Or books may discuss the types of machines, trucks, cars, train whistles, germs, and so forth, that exist. This element also has a variable order and is iterative. And, its information can be discrete or interspersed.

Final Summary. The Final Summary (FS) element is a frequent optional element in information books. It is sort of a summary statement(s) about the information covered in a particular book. Table 4 contains examples of this element. Sometimes the element is very short (one or two sentences) and sometimes it is longer. This element has a fixed order-- it always follows the elements already discussed.

Insert Table 4 about here

Afterword. The Afterword (A) element is an optional element. It is not frequent element, and it seems to be a preferred element of certain authors. It is always at the very end of the book. It is unlike the Final Summary element in that it does not summarize aspects discussed in the text, but instead it adds extra information about the topic. And, in the pilot work I have done, it is information which many teachers/parents frequently omit when reading to children. Although other authors do include it in their information books, Gail Gibbons frequently does, so an example from one of her works (Tunnels) will illustrate this element-- see Figure 1.

Insert Figure 1 about here

Summary. Table 5 contains the generic structure potential or outline for the information books genre based on my preliminary study of the books in my corpus.

Insert Table 5 about here

The round parentheses around an element indicate that the element is an optional one-- in this scheme they are the Category Comparison (CC), Final Summary (FS), and Afterword

(A) elements. Obligatory elements are Topic Presentation (TP), Description of Attributes (DA) and Characteristic Events (CE). The angled brackets around an element indicate the possibility that the element can be interspersed in other elements-- four elements can do this-- Topic Presentation, Description of Attributes, Characteristic Events, and Category Comparison. However, the carat after Topic Presentation indicates that although it may be interspersed in any of the other three elements enclosed by the brackets, it must be first. The raised dots between Description of Attributes, Characteristic Events, and Category Comparison indicate that these elements have variable order so that if Topic Presentation is interspersed in an element, it could be included in any of these three-- the first one-- realized in the book. The angled brackets also indicate that the Description of Attributes element may be interspersed in Characteristic Events or Category Comparison (if that element is realized in a particular book), or Characteristic Events may be interspersed in Description of Attributes, or Category Comparison, and so forth. The curved arrow above the Description of Attributes, Characteristic Events and Category Comparison elements indicates that these may be iterative.

Discussion

Certainly, a major factor in children's understanding information books is what children might already know about the topic a particular information book is about. However,

children's difficulty with particular information books might also be due to how these particular information books realize the general structure potential. For example, a book like Squirrels by Wildsmith (1974)-- versus The Squirrel written by Lane (1981) on the same topic-- might be an "easier" book for children to understood because Wildsmith's Squirrels does not include the optional Category Comparison element whereas Lane's The Squirrel book does. In addition, in Wildsmith's Squirrels, the Description of Attributes and Characteristic Events elements are discrete elements, not ones interspersed in other elements, but interspersion is the case for Lane's The Squirrel. In other words, how a particular book realizes the properties of the global text structure potential may be an important factor in learning its structure and using it. Thus, these properties of interspersion and also the features of variable order of elements, and so forth, may be relevant factors regarding children's learning about the registers of the genre in general. Hopefully, my initial findings on the generic shape of information books reported in this paper will be a useful step in this area of research.

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Table 1

Examples of Discrete Topic Presentation (TP) Elements

* It is easy to recognize a squirrel.

[Wildsmith, B. (1974). Squirrels.]

* There are toy trucks and real trucks.

[Rockwell, A. (1984). Trucks.]

* People have always wanted to fly.

[Gibbons, G. (1986). Flying.]

* Wooooooooooo, wooooooooooo, woo, wooooooooooo
A train is coming down the truck.
Again and again the whistle blows.
Wooooooooooo, wooooooooooo, woo, wooooooooooo
Each time the train thunders toward a crossing the engineer blows the warning signal. Train whistles are signals, a kind of language. Each signal means something special.

[Sattler, H. R. (1985). Train whistles.]

* You wake up one morning. But you don't feel like getting out of bed. Your arms and legs ache. Your head hurts. You have a fever. And your throat is sore.
"I'm sick," you say. "I must have caught a germ."
Everyone knows that germs can make you sick. But not everyone knows how.

[Berger, M. (1985). Germs make me sick!]

* Once upon a time a hugh fish was swimming around when along came a smaller fish. The big fish was so hungry it swallowed the other fish whole. The big fish died and sank to the bottom to the lake.
This happened ninety million years ago. How do we know? We know because the fish turned to stone. The fish became a fossil. A plant or an animal that has turned to stone is called a fossil.

[Aliki. (1972). Fossils tell of long ago.]

Table 2

Examples of Interspersed Topic Presentation (TP) Elements

* The shopping day hasn't begun yet, but department store employees are already at work, tidying up the day before. At the back of the building, big trucks pull up to deliver the new merchandise order by the store.....

[Gibbons, G. (1984a). Department store.]

* A red squirrel scampers though the treetops as safely as if it were on the ground. It is the acrobat and tightrope walker of the woods.....

[Lane, M. (1981). The squirrel.]

* Panda cubs are tiny when they are born. This one-day-old panda weighs about two ounces. She is one of two cubs born at the Madrid Zoo, in Spain.....

[Hoffman, M. (1984). Panda.]

* The words for the book are typed on a keyboard like a typewriter. The words are stored on a computer disc which looks like a record.....

[Althea. (1980). Making a book.]

Table 3

The Description of Attributes Element from Squirrels

(Wildsmith, 1974)

Topic Presentation	It is easy to recognize a squirrel.
Description of Attributes	He is a furry, small animal with long, bushy tail, two strong back legs, two small front paws, two large tufted ears which stick up, and two big front teeth. He looks happy and mischievous. In summer-time the squirrel's coat is quite thin. But in winter-time it grows thick and strong. He seems to have little socks on his feet and warm fur-gloves on his front paws.
Characteristic Events	Squirrels live in trees.....

Table 4

Examples of Final Summary (FS) Elements

* A big city port is an important place.

[Maestro, B., & DelVecchio, E. (1983). Big city port.]

* Big wheels are good. They help us every day.

[Rockwell, A. (1986). Big wheels.]

* The next time you hear a train whistle, listen carefully. Those blasts are more than noise-- they are a message in code. See if you can figure out what they are saying.

[Sattler, H. R. (1985). Train whistles.]

* Next time you walk in the woods, if you are quiet and observant, you will perhaps see squirrels contented and busy. They might be jumping from tree to tree, frolicking on trunks and boughs, or possibly hiding a store of nuts for the winter.

[Wildsmith, B. (1974). Squirrels.]

* Germs do make you sick-- sometimes. But you can help yourself be as fit as a fiddle all of the rest of the time!

[Berger, M. (1985). Germs make me sick!]

* The library is the perfect place to learn about new things, to find the answers to questions, and most important, to enjoy the fun of reading!

[Gibbons, G. (1985). Check it out! The book about libraries.]

* Watching craftsman shape common materials into something of beauty is always enjoyable, especially when speed and precision are part of the art. The glass animal maker possesses a rare skill, and with it he produces creatures that are all individual sculptures-- each one a unique member of the see-through zoo.

[Haldane, S. (1984). The see-through zoo: How glass animals are made.]

Table 5

Global Text Structure for the Information Book Genre

Summary of the Global Structure Potential

[‹TP› ^ ‹DA› ‹CE› (‹CC›)] ^ (FS) ^ (A)

Global Structure Element	Element Properties
TP = Topic Presentation	Obligatory Fixed order Discrete or interspersed
DA = Description of Attributes	Obligatory Variable order Discrete or interspersed Can be iterative
CE = Characteristic Events	Obligatory Variable order Discrete or interspersed Can be iterative
CC = Category Comparison	Optional Variable order Discrete or interspersed Can be iterative
FS = Final Summary	Optional Fixed order
A = Afterword	Optional Fixed order

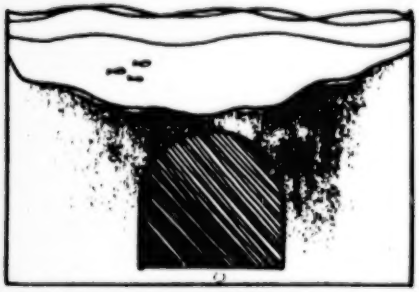
Figure Caption

Figure 1. The Afterword Element from Tunnels (Gibbons, 1984).

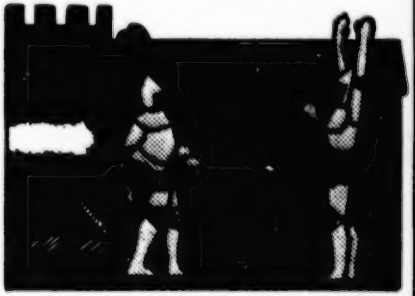
...tunnels.... tunnels....tunnels...

Cavemen dug tunnels to connect their caves.

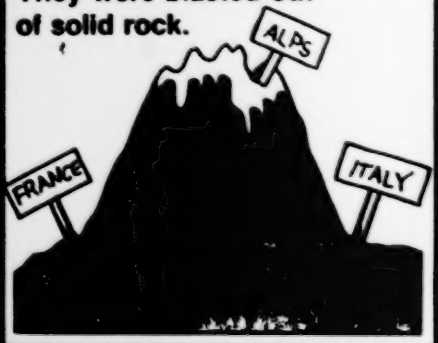
The first big man-made tunnel was built under a river in Babylon over 4000 years ago.



Many years ago, people dug tunnels under the walls of forts and came up to surprise the enemy.

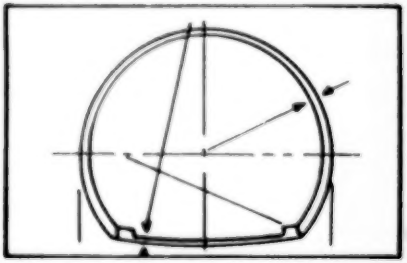


Five great tunnels go through the Alps. They were blasted out of solid rock.



The first man-made tunnel in the United States was the Schuylkill Canal Tunnel in Pennsylvania. It was opened in 1821.

The Seikan Tunnel in Japan is being built under water. It will be 23 miles long —the longest tunnel in the world.



...tunnels.... tunnels....tunnels...